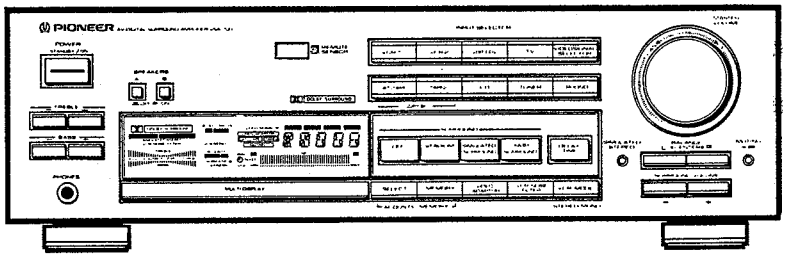
Operating Instructions

AV DIGITAL SURROUND AMPLIFIER
AMPLIFICATORE DIGITALE AV DI CIRCONDAMENTO

VSA-700



Thank you for buying this Pioneer product. Please read through these operating instructions so you will know how to operate your model properly. After you have finished reading the instructions, put them away in a safe place for future reference.
In some countries or regions, the shape of the power plug and power outlet may sometimes differ from that shown in the explanatory drawings. However, the method of connecting and operating the unit is the same.

WARNING: TO PREVENT FIRE OR SHOCK HAZARD, DO NOT EXPOSE THIS APPLIANCE TO RAIN OR MOISTURE.

IMPORTANT NOTICE

[For U.S. and Canadian models]

The serial number for this equipment is located on the rear panel. Please write this serial number on your enclosed warranty card and keep it in a secure area. This is for your security.

[For Canadian model]

CAUTION: TO PREVENT ELECTRIC SHOCK DO NOT USE THIS (POLARIZED) PLUG WITH AN EXTENSION CORD, RECEPTACLE OR OTHER OUTLET UNLESS THE BLADES CAN BE FULLY INSERTED TO PREVENT BLADE EXPOSURE.

ATTENTION: POUR PREVENIR LES CHOCS ELECTRIQUES NE PAS UTILISER CETTE FICHE POLARISSE AVEC UN PROLONGATEUR UNE PRISE DE COURANT OU UNE AUTRE SORTIE DE COURANT, SAUF SI LES LAMES PEUVENT ETRE INSEREES A FOND SANS EN LAISSER AUCUNE PARTIE A DECOUVERT.

LINE VOLTAGE SELECTOR SWITCHES

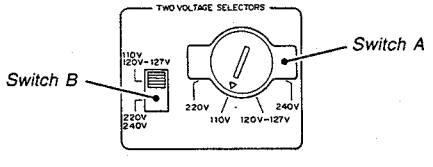
Only multi voltage models are provided with these switches, U.S.A., Canadian, U.K., Australia and Europe models are not provided with them.
Mains voltages in Saudi Arabia are 127V and 220V only. Never use this model set to 110V in Saudi Arabia.

You will find the line voltage selector switches on the rear panel. Before your model is shipped from the factory, the switches are set to the power requirements of the destination; nevertheless, you should check that they are set properly before plugging the power cord into the wall outlet. If the voltage requirements differ, adjust the selector switches as follows. Before adjusting, disconnect the power cord.

1. **Provide yourself with a medium size screwdriver.**
2. **Changing the position of switch A, B**

Insert the screwdriver into the slot on the voltage selector and adjust so that the tip of the slot points to the voltage value of your area.
Changing the position of switch A, B
Set it to the power voltage of your area.

NOTE:
Both switches A and B must be set to the same voltage.



PIONEER®
The future of sound and vision.

SAFETY INSTRUCTIONS

READ INSTRUCTIONS — All the safety and operating instructions should be read before the appliance is operated.

RETAIN INSTRUCTIONS — The operating instructions should be retained for future reference.

HEED WARNING — All warnings on the appliance and in the operating instructions should be adhered to.

FOLLOW INSTRUCTIONS — All operating and use instructions should be followed.

WATER AND MOISTURE — The appliance should not be used near water — for example, near a bathtub, washbowl, kitchen sink, laundry tub, in a wet basement, or near a swimming pool, etc.

LOCATION — The appliance should be installed in a stable location.

WALL OR CEILING MOUNTING — The appliance should not be mounted to a wall or ceiling.

VENTILATION — The appliance should be situated so that its location or position does not interfere with its proper ventilation. For example, the appliance should not be situated on a bed, sofa, rug, or similar surface that may block the ventilation openings; or, placed in a built-in installation, such as a bookcase or cabinet that may impede the flow of air through the ventilation openings.

HEAT — The appliance should be situated away from heat sources such as radiators, heat registers, stoves, or other appliances (including amplifiers) that produce heat.

POWER SOURCES — The appliance should be connected to a power supply only of the type described in the operating instructions or as marked on the appliance.

POWER-CORD PROTECTION — Power-supply cords should be routed so that they are not likely to be walked on or pinched by items placed upon or against them, paying particular attention to cords at plugs, convenience receptacles, and the point where they exit from the appliance.

POLARIZATION — If your purchased product is provided with a polarized power plug, please read the following instructions. This product is equipped with a polarized alternating current line plug (a plug having one blade wider than the other). This plug will fit into the power outlet only one way. This is a safety feature. If you are unable to insert the plug fully into the outlet, try reversing the plug. If the plug should still fail to fit, contact your electrician to replace your obsolete outlet. Do not defeat the safety purpose of the polarized plug.

CLEANING — The appliance should be cleaned only with a polishing cloth or a soft dry cloth. Never clean with furniture wax, benzine, insecticides or other volatile liquids since they may corrode the cabinet.

POWER LINES — An outdoor antenna should be located away from power lines.

NONUSE PERIODS — The power cord of the appliance should be unplugged from the outlet when left unused for a long period of time.

OBJECT AND LIQUID ENTRY — Care should be taken so that objects do not fall and liquids are not spilled into the enclosure through openings.

DAMAGE REQUIRING SERVICE — The appliance should be serviced by a Pioneer authorized service center or qualified service personnel when:

- The power-supply cord or the plug has been damaged; or
- Objects have fallen, or liquid has been spilled into the appliance; or
- The appliance has been exposed to rain; or
- The appliance does not appear to operate normally or exhibits a marked change in performance; or
- The appliance has been dropped; or the enclosure damaged.

SERVICING — The user should not attempt to service the appliance beyond that described in the operating instructions. For all other servicing, contact the nearest Pioneer authorized service center.

OUTDOOR ANTENNA GROUNDING — If an outside antenna is connected to the antenna terminal, be sure the antenna system is grounded so as to provide some protection against voltage surges and built up static charges.
In the U.S.A. section 810 of the National Electrical Code, ANSI/NFPA No. 70-1984, provides information with respect to proper grounding of the mast and supporting structure, grounding of the lead-in wire to an antenna discharge unit, size of grounding conductors, location of antenna-discharge unit, connection to grounding electrodes, and requirements for the grounding electrode. See Fig. A.

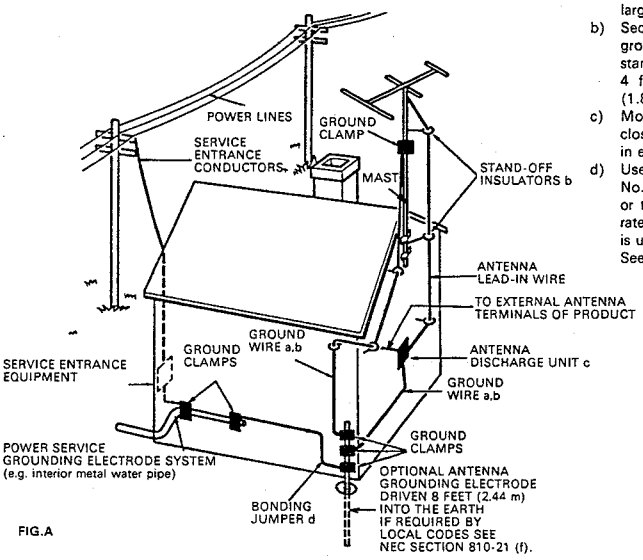

POWER LINES
GROUND CLAMP
SERVICE ENTRANCE CONDUCTORS
MAST
STAND-OFF INSULATORS b
ANTENNA LEAD-IN WIRE
TO EXTERNAL ANTENNA TERMINALS OF PRODUCT
GROUND WIRE a,b
GROUND CLAMPS
ANTENNA DISCHARGE UNIT c
SERVICE ENTRANCE EQUIPMENT
GROUND WIRE a,b
GROUND CLAMPS
POWER SERVICE GROUNDING ELECTRODE SYSTEM (e.g. interior metal water pipe)
OPTIONAL ANTENNA GROUNDING ELECTRODE DRIVEN 8 FEET (2.44 m) INTO THE EARTH IF REQUIRED BY LOCAL CODES SEE NEC SECTION 810-21 (f).
BONDING JUMPER d

FIG.A

a) Use No. 10 AWG (5.3 mm^2) copper, No. 8 AWG (8.4 mm^2) aluminum, No. 17 AWG (1.0 mm^2) copperclad steel, bronze wire, or larger as ground wire.
b) Secure antenna lead-in and ground wires to house with stand-off insulators spaced from 4 feet (1.22 meters) to 6 feet (1.83 meters) apart.
c) Mount antenna discharge unit as closely as possible to where lead-in enters house.
d) Use jumper wire not smaller than No.6 AWG (13.3 mm^2) copper, or the equivalent, when a separate antenna-grounding electrode is used.
See NEC Section 810-21 (j).

IMPORTANT 1

The lightning flash with arrowhead, within an equilateral triangle, is intended to alert the user of the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.

CAUTION
RISK OF ELECTRIC SHOCK DO NOT OPEN

CAUTION:
TO PREVENT THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER (OR BACK). NO USER-SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.

The exclamation point within an equilateral triangle is intended to alert the user of the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

IMPORTANT 2

If the apparatus is fitted with AC mains power outlet(s), see REAR PANEL FACILITIES for convenient connection of additional Hi-Fi component(s). Make all connections to the AC outlet(s) and the signal terminals first. Connect the plug to the wall socket last, make sure that the power switch is off. Disconnect the wall plug when the equipment is not in (regular) use, e.g. when on vacation.

FOR USE IN THE UNITED KINGDOM

The wires in this mains lead are coloured in accordance with the following code:

Blue:	Neutral
Brown:	Live

As the colours of the wires in the mains lead of this apparatus may not correspond with the coloured marking identifying the terminals in your plug proceed as follows:
The wire which is coloured blue must be connected to the terminal which is marked with the letter N or coloured black.
The wire which is coloured brown must be connected to the terminal which is marked with the letter L or coloured red.
Equipment sold in the U.K. is not supplied with a power plug.

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INFORMATION TO USER [FOR U.S. MODEL]

This equipment generates and uses radio frequency energy and if not installed and used properly, that is, in strict accordance with the manufacturer's instructions, may cause interference to radio and television reception. It has been type tested and found to comply with the limits for a Class B computing device in accordance with the specifications in Subpart J of Part 15 of FCC Rules, which are designed to provide reasonable protection against such interference in a residential installation. However, there is no guarantee that interference will not occur in a particular installation.

If this equipment does cause interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- reorient the receiving antenna
- relocate this equipment with respect to the receiver
- move this equipment away from the receiver
- plug this equipment into a different outlet so that equipment and receiver are on different branch circuits.

If necessary, the user should consult the dealer or an experienced radio/television technician for additional suggestions. The user may find the following booklet prepared by the Federal Communications Commission helpful:
"How to Identify and Resolve Radio-TV Interference Problems".
This booklet is available from the US Government Printing Office, Washington, D.C., 20402, Stock No. 004-000-00345-4.

The above instructions apply only to units which will be operated in the United States.

FEATURES

Total of 200W high output power (FTC)

[POWER IN]

Stereo mode: 100W + 100W 20 Hz — 20 kHz, 0.005% * * 8Ω

Surround mode: 70W + 70W (front) 20 Hz — 20 kHz, 0.005% * * 8Ω

30W + 30W (surround) 20 Hz — 20 kHz, 0.08% * * 8Ω

* * Measured by Audio spectrum analyzer.

Built-in Digital Dolby Surround Circuit and 4 Power Amplifier

Enjoy the presence and the expansive effect of surround playback.

3 different surround effects and 3-step delay times are available.

AV Remote Control Unit with Learning Functions

With the attached remote control unit you can operate any Pioneer audio or video component bearing the mark. And with additional learning functions the whole AV surround system including TV and VCR of other makers can be controlled. (Some makers' remote control systems, however, are not suitable for programming.)

Complete Set of A/V Input Terminals

Audio: DAT, TAPE, CD, TUNER, PHONO

Video: VCR 1, VCR 2, VDP/CDV, TV, VIDEO ADAPTOR

Video Signal Selector

As audio and video sources can be freely combined, you can make your original BGV easily.

Dubbing Function

You can dub video tapes from VCR 1 to VCR 2, or vice versa.

Acoustic Memory

Up to 3 BASS and TREBLE settings can be preset.

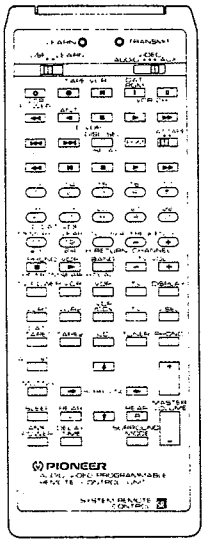
60/45/30/15-minute Sleep Timer Function

Remaining time is displayed during the sleep operation.

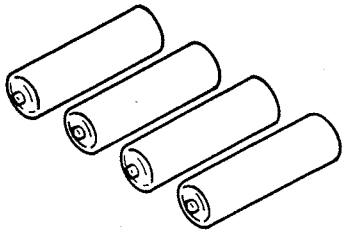
BEFORE USING THE UNIT

Accessories

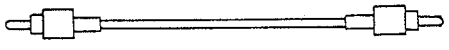
- Remote Control Unit 1



- LR03 (AM-4) alkali batteries 4



- Video connection cord 1



THE SURROUND EFFECT

This unit has a built-in surround processor, adding presence and an expansive effect to the sound.

STADIUM:
Select this position when watching sports programs such as baseball game broadcasts, etc., for a stadium-like effect.

SIMULATED SURROUND:
Use this mode for monaural sources. You will obtain an expansive sound, with outstanding presence.

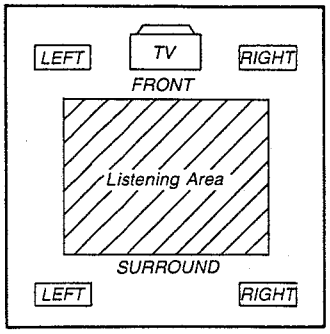
DOLBY SURROUND:
Choose this setting for movies (especially video tapes bearing the DOLBY SURROUND mark) and music playback. You will enjoy an effect similar to that of movie theaters or concert halls.

NOTE:
When using the surround effect, always set the rear panel SURROUND switch to the ON position.

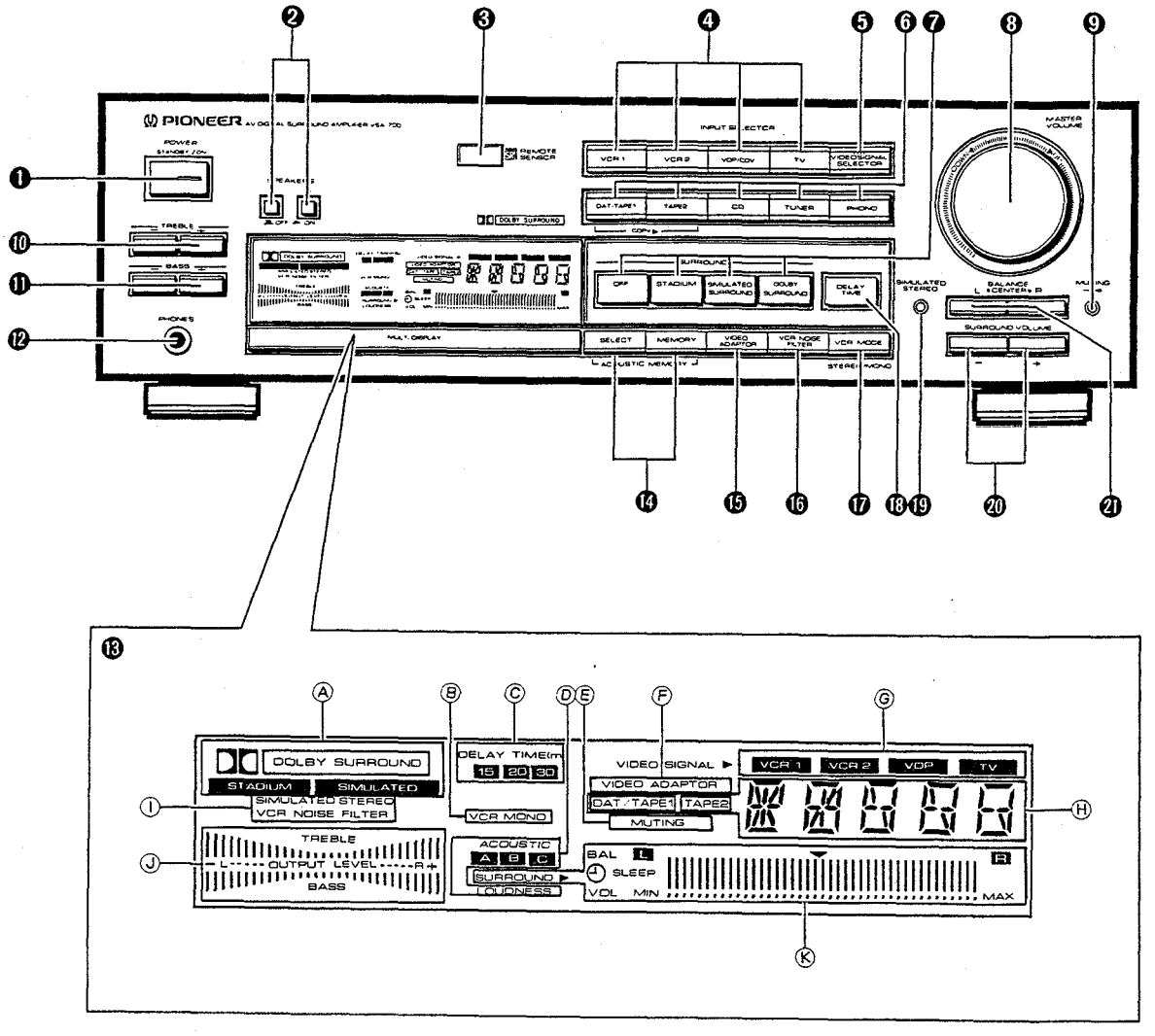
This product is manufactured according to patents from Dolby Laboratories Licensing Corporation. It agrees with US patents 3,632,886 : 3,746,792 : 3,959,590 and Canadian patents 1,004,603 : 1,037,877. "Dolby" and the double-D symbol are trademarks of Dolby Laboratories Licensing Corporation.

Surround Speakers Installation Examples

For getting the most out of the surround system, place the speakers as shown below.



FRONT PANEL FACILITIES



❶ POWER STANDBY/ON Switch

To switch the unit between ON/STANDBY. When the power is turned ON, the volume indicator will flash for about 6 seconds. Press the switch again to set the unit to standby mode.

[Timer ON/OFF possible]
When the unit is switched ON, ON/OFF control can be performed by means of the optional timer.

NOTE:
When the power is turned ON, muting will be applied to prevent sound from being output while the volume level indicator is flashing (about 6 seconds)

❷ SPEAKERS ON/OFF Switches

A:
Press to listen through the speakers connected to the A terminals.

B:
Press to listen through the speakers connected to the B terminals. Surround output is sent to the SPEAKERS B terminals when the rear panel SURROUND switch is ON.

❸ REMOTE SENSOR Window

❹ Video INPUT SELECTOR Switches

VCR 1:
Press this switch when playing back a tape in the video deck connected to the VCR 1 terminals.

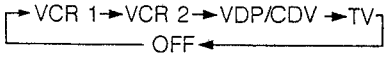
VCR 2:
Press this switch when playing back a tape in the video deck connected to the VCR 2 terminals.

VDP/CDV:
Press to watch a program from a video disc player or a video compact disc player connected to the VDP/CDV terminals.

TV:
Press to watch TV programs (reception with a TV tuner connected to the TV terminals).

❺ VIDEO SIGNAL SELECTOR

The monitor output (TO MONITOR TV) and VCR REC output changes in the order of



each time the switch is pressed.
(The sound output is not affected.)

NOTE:
When using a VCR for sound recording only, follow the operating instructions of the VCR.

❻ Audio INPUT SELECTOR Switches

DAT/TAPE 1:
Press to listen to the sound from the component connected to the DAT/TAPE 1 terminals.

TAPE 2:
Press to listen to the playback sound from the tape deck connected to the TAPE 2 terminals.

CD:
Press to listen to the playback sound from the CD player connected to the CD terminals.

TUNER:
Press to listen to AM or FM broadcasts with the tuner connected to the TUNER terminals.

PHONO:
Press to listen to the playback sound from the record player connected to the PHONO terminals.

NOTE:
The DAT/TAPE 1 signal can be monitored at the TAPE 2 REC terminals, allowing for DAT/TAPE 1.TAPE 2 dubbing.

❼ SURROUND Mode Selector Switches

This switch operates when the SURROUND switch on the rear panel is set to ON.

OFF:
To cancel the surround function.

STADIUM:
Ideal for sports broadcasts, etc.

SIMULATED SURROUND:
Gives concert-hall presence to monaural sound (AM, TV, etc.).

DOLBY SURROUND:
Select this setting when watching video tapes or video disk player bearing the DOLBY STEREO or DOLBY SURROUND mark.

❽ MASTER VOLUME Control

Adjusts sound volume level. To adjust the balance between front and rear speakers volume for surround playback, also use the SURROUND VOLUME.

❾ MUTING Switch

Used to temporarily mute the sound. The volume is restored when pressed again.

❿ TREBLE Switches

Use to adjust the high-frequency level. Press the + switch to increase high-frequency level, and the - switch to decrease it.

⓫ BASS Switches

Use to adjust the low-frequency level. Press the + switch to increase low-frequency level, and the - switch to decrease it.

⑫ PHONES Terminal

Connect the plug of a pair of headphones. When listening through the headphones only, turn both SPEAKERS switches OFF.

⑬ DISPLAY Section

Shows the unit condition after each switch operation.

Ⓐ Shows the surround mode.

Ⓑ Lights up when the VCR MODE selector switch is set to MONO.

Ⓒ Shows the delay time set with the DELAY TIME switch.

Ⓓ Shows the selected ACOUSTIC MEMORY.

Ⓔ Lights up when the MUTING switch is turned on.

Ⓕ Lights up when the VIDEO ADAPTER switch is turned on.

Ⓖ Shows the component selected with the VIDEO SIGNAL SELECTOR switch.

Ⓗ Shows the name of the component selected with the INPUT SELECTOR switches.

Ⓘ Lights up when the SIMULATED STEREO and VCR NOISE FILTER switches are turned on.

Ⓙ Normally shows left/right output level. After operating the TREBLE, BASS or ACOUSTIC MEMORY SELECT switch, it shows the TREBLE and BASS settings. After a few seconds it returns to the OUTPUT level indication.

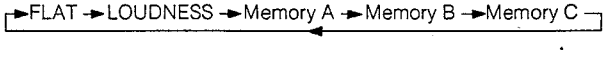
Ⓚ Normally shows the volume/balance setting. When operating one of the SURROUND VOLUME switches with the surround function activated, it shows the surround volume. When setting the sleep timer function with the remote control unit, it shows the sleep time. When adjusting the SURROUND BALANCE with the remote control unit, it shows the surround balance setting.

⑭ ACOUSTIC MEMORY Switches (SELECT/MEMORY)

You can store up to three BASS and TREBLE tone settings in memory.

MEMORY:
Press this switch to store in memory.

SELECT:
Tone setting changes as follows when pressing this switch repeatedly:



FLAT:
Flat tone characteristics.

LOUDNESS:
Low and high frequencies are emphasized. Use this setting to obtain a full-bodied sound when listening at low volume levels.

How to Use the Acoustic Memory

1. Choose the desired memory address (A, B or C) with the ACOUSTIC SELECT switch.
2. Adjust tone with the BASS and TREBLE controls.
3. Press the MEMORY switch. The indicator of the selected memory flashes and the setting is memorized.
   - This will store the first tone setting in memory. Repeat the procedure to store the remaining two.
   - To recall a memorized tone setting, choose the corresponding memory address with the SELECT switch.

Notes on the Memory Function

- As long as the power cord is connected to an outlet, the memory contents are retained, when setting the power switch to the STANDBY position. Even if you disconnect the power cord, the back-up condenser will supply enough power to protect the memory contents for about two weeks.
- When the memory has become erased it has to be preset again.

⑮ VIDEO ADAPTOR Switch

Press to play back a video source through the component connected to the VIDEO ADAPTOR terminals.

⑯ VCR NOISE FILTER Switch

Use this switch when playing back video tapes containing too much noise.
It functions when the VCR 1 or VCR 2 inputs are selected.

> **NOTE:**
> This function is cancelled when DAT/TAPE 1 or TAPE 2 are selected.

⑰ VCR MODE Selector Switch (VCR MODE)

Set this switch to ON, when using a VCR with monaural audio output.
It functions when the VCR 1 or VCR 2 inputs are selected.

> **NOTE:**
> This function is cancelled when DAT/TAPE 1 or TAPE 2 are selected.

⑱ DELAY TIME Switch

Switches the surround delay time in three steps.
For DOLBY SURROUND 20 mS is standard.

⑲ SIMULATED STEREO Switch

This switch gives monaural sources a stereo-like effect.

⑳ SURROUND VOLUME Switches

These switches control the surround playback volume level of the speakers connected to the B SPEAKERS terminals. Press + to increase this level, and − to decrease it. When performing this adjustment, bear in mind the balance with the front speakers.

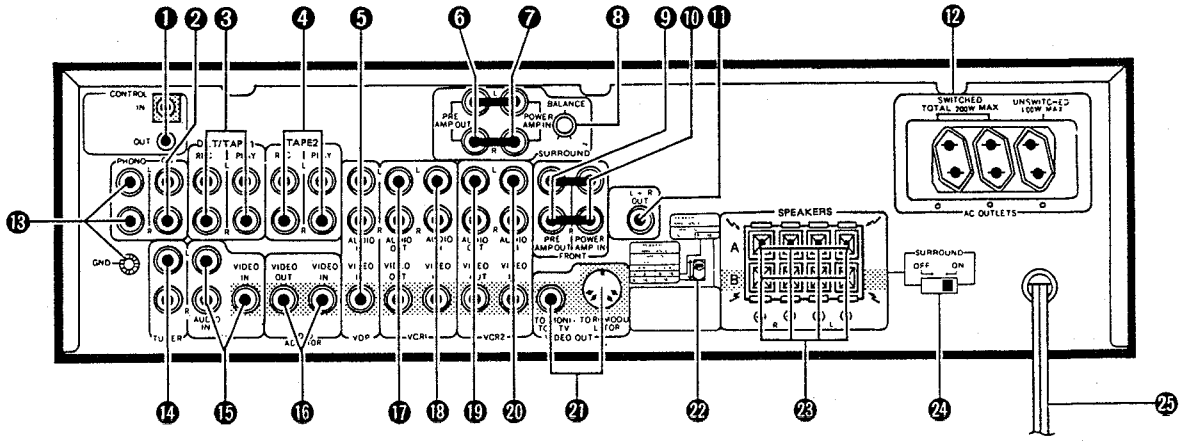
㉑ BALANCE Switches

Adjust right/left channel sound volume level.
L . . . Press when right channel level is too high.
R . . . Press when left channel level is too high.
Press L and R simultaneously to return balance to what is called the mechanical center.

On the Last Memory Function

When the unit is turned on, it will be in the same operational condition that existed when it was turned off.

REAR PANEL FACILITIES



The illustration shows U.K. model.

❶ CONTROL IN/OUT Terminals

These terminals are for input/output of control signals when operating other components with the attached remote control unit (See page 15 for details.).

❷ CD Input Terminals

Connect to the output terminals of your CD player.

❸ DAT/ANALOG TAPE DECK (DAT/TAPE 1) REC/PLAY Terminals

REC:

Connect to the record (input) terminals of a digital audio tape (DAT) deck or analog tape deck.

PLAY:

Connect to the play (output) terminals of a digital audio tape (DAT) deck or analog tape deck.

> **NOTE:**
> For connection to a DAT deck connect to the analog input/output terminals of the deck.

❹ TAPE 2 REC/PLAY Terminals

REC:

Connect to the record (input) terminals of a tape deck.

PLAY:

Connect to the play (output) terminals of a tape deck.

❺ VDP/CDV AUDIO/VIDEO IN Terminals

Connect to the audio/video output terminals of a video disc player or video compact disc player.

❻ SURROUND PRE AMP OUT Terminals

Use these terminals for increasing the surround sound output with an optional power amplifier.
Connect the power cord of this additional power amplifier to the AC OUTLET (SWITCHED) of this unit.

❼ SURROUND POWER AMP IN Terminals

For connection of an optional pre-amplifier when using this unit as power amplifier.

❽ SURROUND BALANCE Control knob

Adjust the control before performing surround playback. For adjustment select STADIUM or DOLBY SURROUND with the SURROUND switch on the front panel. While playing back a monaural source (AM broadcast, etc.), adjust this control so that the surround (rear) speaker sound level becomes minimum.

> **NOTE:**
> Always perform this adjustment. Otherwise, you will not obtain the correct surround playback.

⑨ FRONT PRE AMP OUT Terminals
Use these terminals for increasing output with an optional power amplifier.

⑩ FRONT POWER AMP IN Terminals
When using this unit as the power amplifier for the front speakers, connect the optional preamplifier to these terminals.

⑪ L + R OUT Terminal
Outputs a mixture of right-channel and left-channel audio signals, and can be used for front center output for the Dolby Surround system with a connected monaural amplifier.

⑫ AC OUTLETS
(SWITCHED TOTAL 200 W MAX.)
Power supplied through these outlets is turned on and off by the POWER switch of this unit. Total electrical power consumption of connected equipment should not exceed 200W.

(UNSWITCHED 100 W MAX.)
Power flows continually to this outlet, regardless of whether this unit is switched ON or OFF. Electrical power consumption of the connected equipment should not exceed 100W.
The unit should be disconnected by removing the mains plug from the wall socket, when not in regular use, e.g. when on vacation.

> **NOTE:**
> Do not connect appliances with high power consumption such as heaters, irons, or television sets to the AC OUTLETS in order to avoid overheating or fire risk.
> This can cause this unit to malfunction.

⑬ PHONO Input Terminals/GND Terminal
Connect here the output of an analog record player. Connect the ground cable to the GND terminal.
Use a moving magnetic (MM) cartridge for the turntable.

⑭ TUNER Input Terminals
Connect to the output terminals of an FM/AM tuner.

⑮ TV AUDIO/VIDEO IN Terminals
Connect to the audio/video output terminals of a TV tuner.

⑯ VIDEO ADAPTOR OUT/IN Terminals
Connect to the output/input terminals of a video adaptor, such as a video enhancer, color corrector, etc.

⑰ VCR 1 AUDIO/VIDEO OUT terminals
Connect to the input (audio/video) terminals of a VCR. If the VCR audio input is monaural, use a commercially available monaural cord for connection.

⑱ VCR 1 AUDIO/VIDEO IN terminals
Connect to the output (audio/video) terminals of a VCR. If the VCR is equipped with a monaural input, set the VCR MODE switch to MONO.

⑲ VCR 2/AUDIO/VIDEO OUT Terminals
Connect to the input (audio/video) terminals of a VCR. If the VCR audio input is monaural, use a commercially available monaural cord for connection.

⑳ VCR 2/ AUDIO/VIDEO IN Terminals
Connect to the play (output) terminals of a VCR. When the audio output is monaural, set the VCR MODE switch to the MONO position.

㉑ VIDEO OUT Terminals
TO MONITOR TV Terminal:
Connect to the video input terminal of a monitor TV.

TO RF MODULATOR Terminal:
When using a TV not equipped with a video input terminal as monitor for video components, connect the TV with an optional adapter (JA-RF5 RF modulator).

㉒ SPEAKER IMPEDANCE switch
- When using the speaker B terminals for surround sound output, set this switch to the upper position. In this case, use speakers with an impedance of 8Ω to 16Ω.
- If the speaker B terminals are not used for surround sound output, set the switch as follows according to the impedance of the speakers used.

	Speaker Impedance	
Upper	4Ω to 8Ω (Using either the A or the B terminals)	8Ω to 16Ω (Using the A and B terminals simultaneously)
Lower	8Ω to 16Ω (Using either the A or the B terminals)	16Ω (Using the A and B terminals simultaneously)

㉓ SPEAKERS Terminals A, B
See page 14 for details.

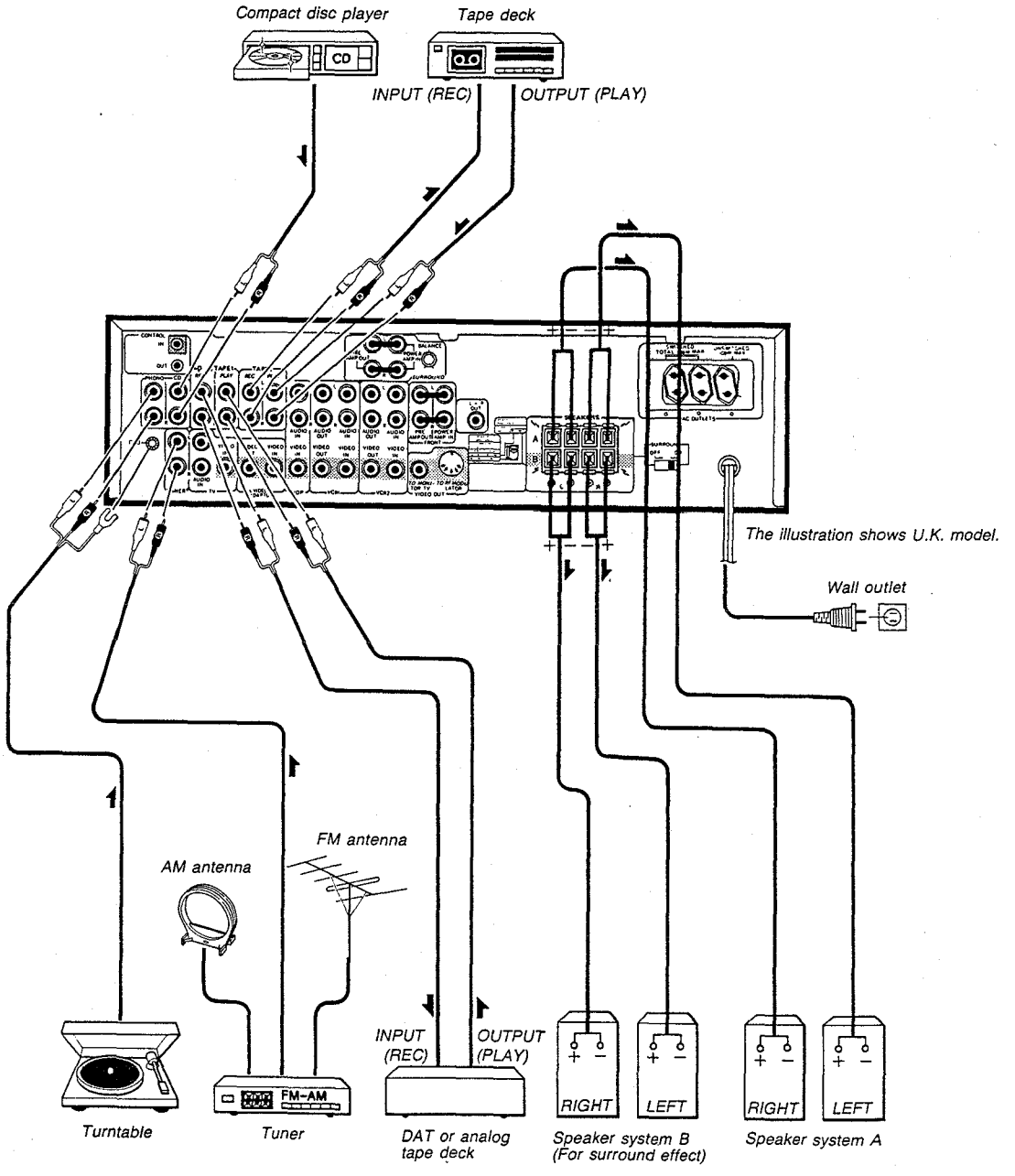
㉔ SURROUND Switch
ON:
Set to this position when the surround speakers are connected to the SPEAKERS terminals B. Make sure to set the speaker impedance select switch properly.

OFF:
Select this position when speakers are connected only to the SPEAKERS terminals A, or the speakers connected to the B terminals are not to be used for surround sound playback.

㉕ Power Cord

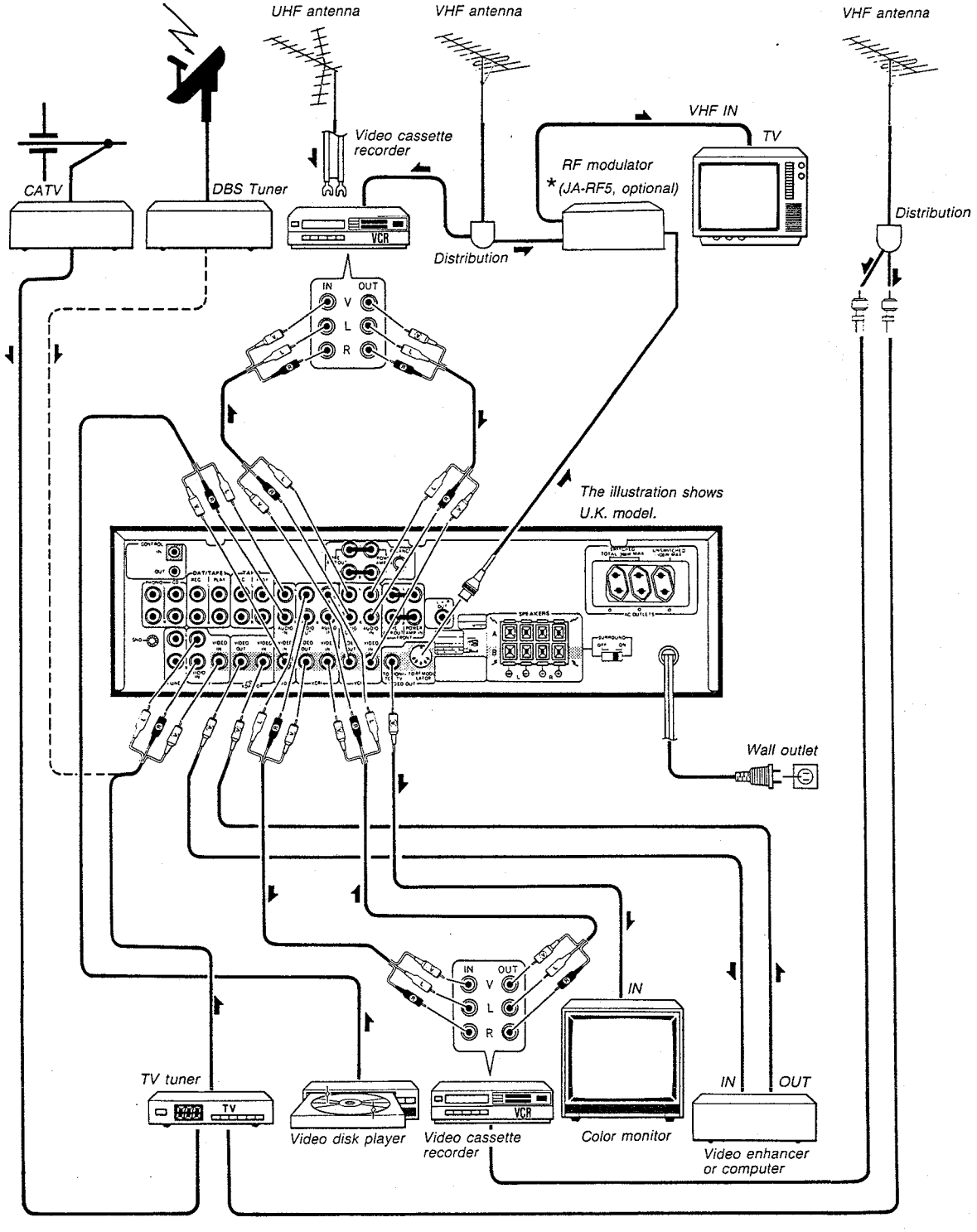
CONNECTIONS

[AUDIO]



[VIDEO]

* For connection of a TV set which is not equipped with a video input jack, use an optional RF modulator (JA-RF5) to change the amplifier output to a VHF signal (Example: CH3 and CH4, for U.S. model only).

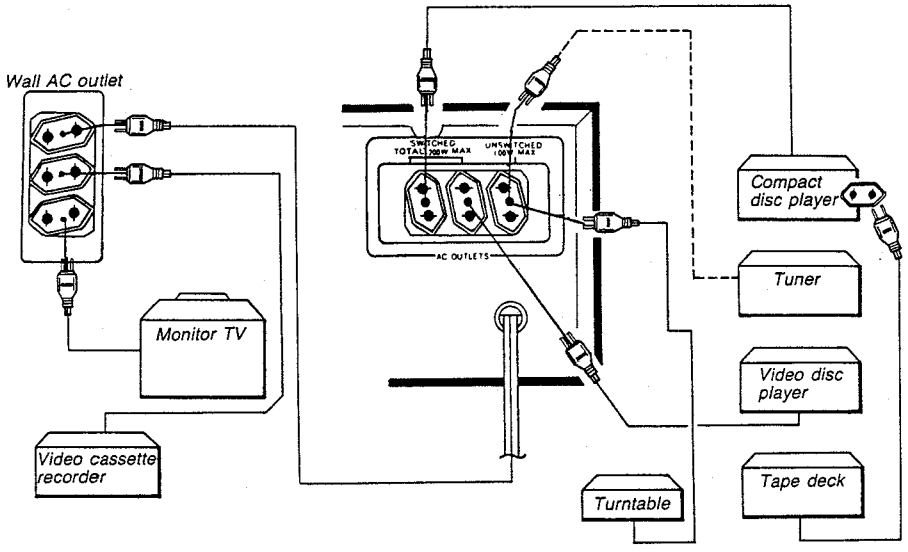


POWER CORD CONNECTIONS

When using a timer, the power cords of the VCR and the monitor TV should be connected directly to wall outlets.

Note on Power Cord Connection

Household outlets are polarity-wired with the earth side connected to ground. For high quality sound reproduction the pin of the power plug which is marked with a white line must be inserted into the slightly longer slot (earth) of the outlet.

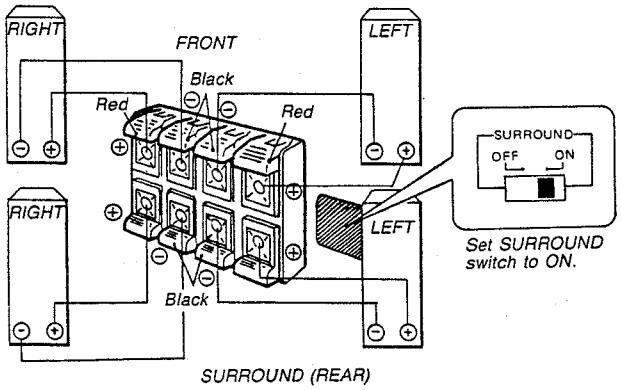


SPEAKER CONNECTIONS

The unit is equipped with two sets of speaker output terminals. Selection between normal stereo mode and surround mode is performed with the SURROUND switch.

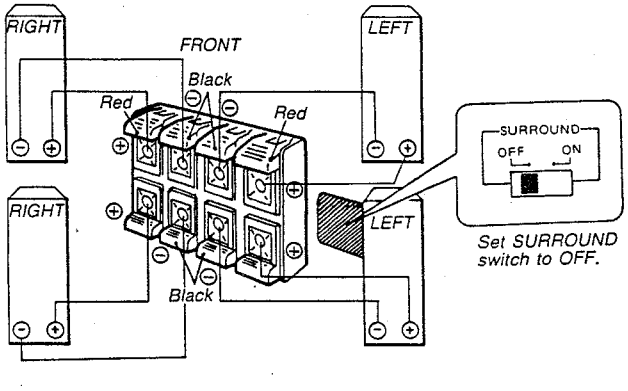
Speaker connection for surround mode:

When setting the SURROUND switch to ON, select the proper impedance with the SPEAKER IMPEDANCE select switch. (See page 11 for details)



Speaker connection for surround mode:

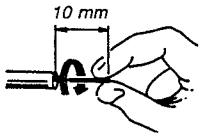
When setting the SURROUND switch to ON, select the proper impedance with the SPEAKER IMPEDANCE select switch. (See page 11 for details)



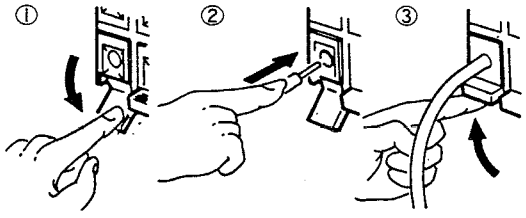
CONNECTING SPEAKER WIRES

Example:
For the lower-row speaker terminals.

1. Strip off the vinyl covering and twist the strands together.



2. Raise the lever in the direction of the arrow and insert the exposed conductor into the hole.
3. Return the lever to its original position to secure the cord.



NOTE:
- Do not allow any of the cord's conductors to protrude from the terminals or touch any other conductors.
- Malfunctioning or breakdowns may occur when conductors come into contact with each other.

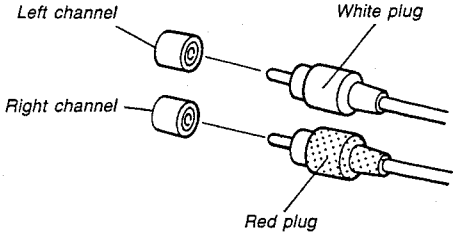
REMOTE CONTROL CORD CONNECTIONS

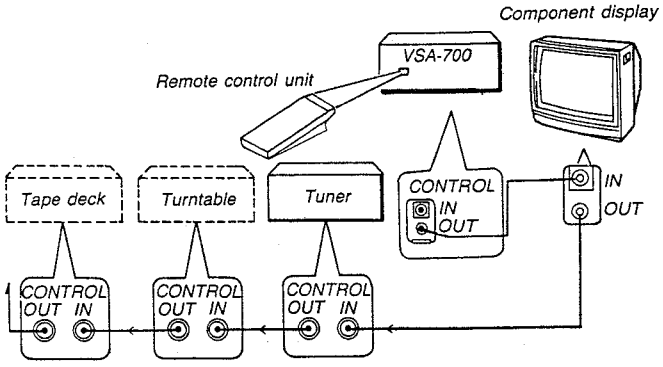
The connections shown below are performed when using the VSA-700 remote sensor.

- By interconnecting the CONTROL jacks of Pioneer units with the mark, the entire system can be operated with this remote control unit, although some of the units (AM/FM tuner, turntable, cassette deck, etc.) may not be equipped with remote sensors. The entire system can be operated by a remote control unit connecting PIONEER stereo components to each other using the control input (CONTROL IN) jack on each component. Use the remote control cord supplied with the respective unit for the connection. An example is shown in the drawing below. As long as you connect "OUT" to "IN", the connecting sequence is arbitrary. In the case of a unit which has only an "IN" connector, however, connect it last.

CONNECTING INPUT/OUTPUT CORDS

Connect white plugs to the L (left) side, and red plugs to the R (right) side. Be sure to push the plugs in securely.

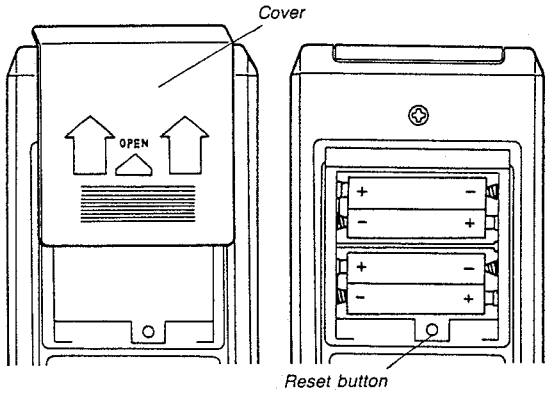




REMOTE CONTROL OPERATIONS

LOADING BATTERIES INTO THE REMOTE CONTROL UNIT

1. **Open the battery compartment cover on the rear of the remote control unit. The cover should open easily if you slide it in the direction of the arrow while pressing on it with your thumb.**
2. **Take out the four supplied alkali (LR03/AM-4) batteries, and insert them into the battery compartment in accordance with the indications in the compartment.**
3. **Close the cover of the battery compartment.**



Incorrect use of batteries may lead to leakage or rupture. Always be sure to follow these guidelines:

A.
Always insert batteries into the battery compartment correctly matching the positive (+) and negative (−) polarities, as indicated inside the compartment.

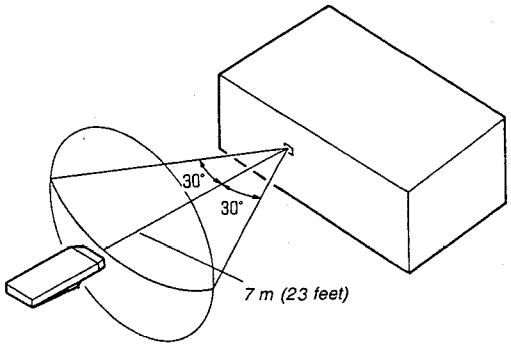
B.
Never mix new and used batteries.

C.
Batteries of the same size may have different voltages, depending on their type. Do not mix different type of batteries.

D.
Both rechargeable and non-rechargeable batteries are available. Be sure to use your batteries in accordance with the caution labels affixed to them.

OPERATION RANGE OF REMOTE CONTROL UNIT

When operating the remote control unit, point the infrared signal transmitter part of the unit at the remote control receiver (REMOTE SENSOR) on the front panel of the VSA-700. The remote control unit may be used within a range of about 7 meters (23 feet) from the remote sensor, within angles of up to about 30 degrees.



Battery Replacement

When the battery is terminated, the transmit indicator will not light up even when a key is pressed. Be sure to replace the batteries as soon as possible. As the programmed functions will be retained in memory only as long as batteries are inserted, remove the old batteries only if they can be replaced by new ones immediately.
Also, be sure to use always the specified batteries (LR03/AM-4 alkaline batteries).

NOTE:
When no batteries are inserted, the programmed memory contents will be erased after 30 to 60 minutes.

REMOTE CONTROL UNIT

FUNCTION OF THE TRANSMIT MODE SELECTOR SWITCH

AUDIO:

Select this position for remote control operation of audio equipment such as CD player, tape deck, DAT deck, turntable or tuner.

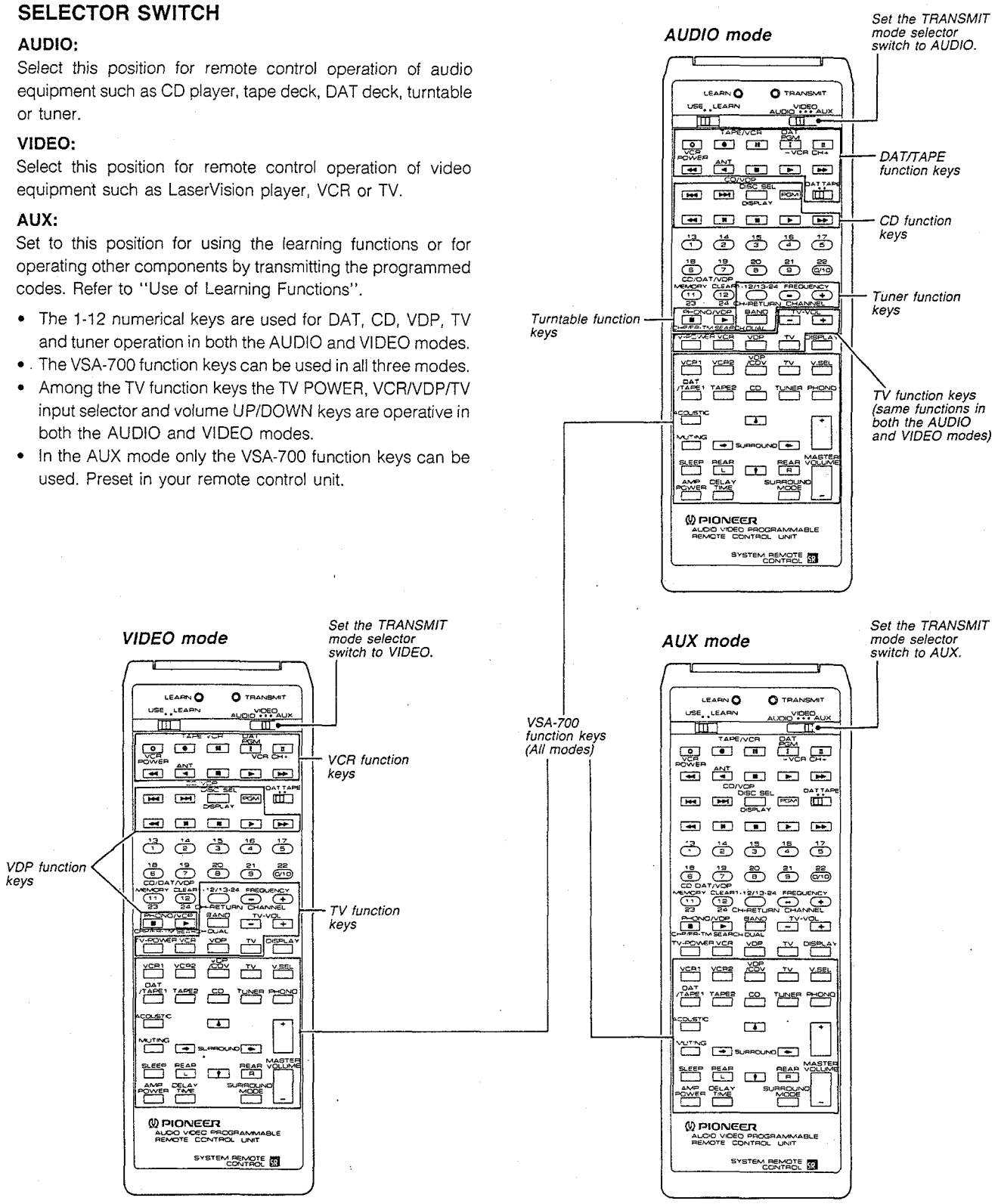
VIDEO:

Select this position for remote control operation of video equipment such as LaserVision player, VCR or TV.

AUX:

Set to this position for using the learning functions or for operating other components by transmitting the programmed codes. Refer to "Use of Learning Functions".

- The 1-12 numerical keys are used for DAT, CD, VDP, TV and tuner operation in both the AUDIO and VIDEO modes.
- The VSA-700 function keys can be used in all three modes.
- Among the TV function keys the TV POWER, VCR/VDP/TV input selector and volume UP/DOWN keys are operative in both the AUDIO and VIDEO modes.
- In the AUX mode only the VSA-700 function keys can be used. Preset in your remote control unit.


AUDIO mode
Set the TRANSMIT mode selector switch to AUDIO.
DAT/TAPE function keys
CD function keys
Tuner function keys
Turntable function keys
TV function keys (same functions in both the AUDIO and VIDEO modes)
VIDEO mode
Set the TRANSMIT mode selector switch to VIDEO.
VCR function keys
VDP function keys
TV function keys
VSA-700 function keys (All modes)
AUX mode
Set the TRANSMIT mode selector switch to AUX.
PIONEER
AUDIO VIDEO PROGRAMMABLE REMOTE CONTROL UNIT
SYSTEM REMOTE CONTROL

■TAPE DECK OPERATION

Set the TRANSMIT mode selector switch to AUDIO.

TAPE function keys (operation of cassette tape deck or DAT)

DAT TAPE selector switch:
Set to DAT for operation of the DAT (Digital Audio Tape) deck, and TAPE for operation of the cassette tape deck.

Explanations in square brackets [ ] are for the DAT deck only.

O (REC MUTE) key :
For insertion of unrecorded spaces between selections.

● (REC) key :
Selects the recording mode.

II (PAUSE) key :
Temporarily stops the tape transport. Press again to resume tape transport.

I (DECK I) key :
Switches to the deck I functions when using a double cassette tape deck.

[DAT PGM key] :
Press to program the DAT deck.

II (DECK II) key :
Switches to the deck II functions when using a double cassette tape deck.

◀◀ (FF) key :
Fast forwards the tape in the direction of the arrow.

◀ (PLAY) key :
Selects reverse playback.

■ (STOP) key :
Stops the tape transport.

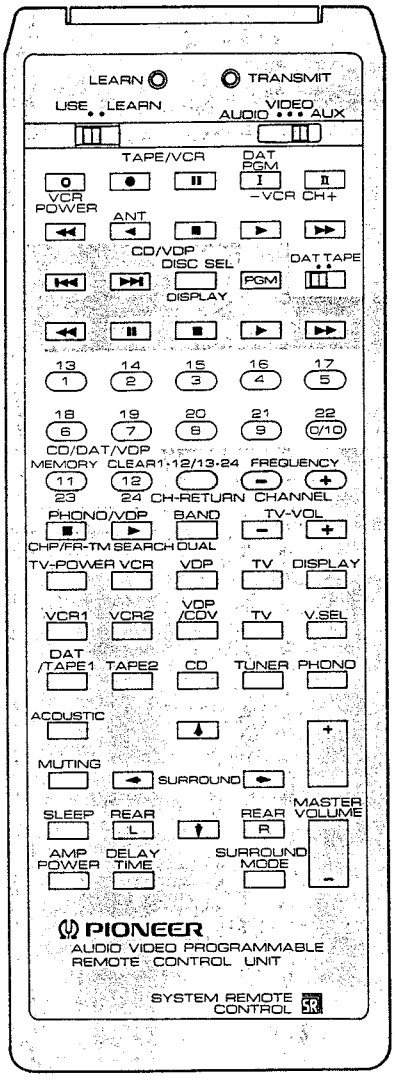
► (PLAY) key :
Selects forward playback.

►► (FF) key :
Fast forwards the tape in the direction of the arrow.

[1 - 0/10 (numeric) keys]:
For entering desired seletions into the memory.

[MEMORY key] :
Stores the program in the memory.

[CLEAR key] :
Clears the program stored in the memory.



■VCR OPERATION

Set the TRANSMIT mode selector switch to VIDEO.

VCR function keys (operation of VCR)

VCR POWER key :
Switches the VCR power ON/OFF.

● (REC) key :
Selects the recording mode.

II (PAUSE/STILL) key :
Sets pause and still picture.

I VCR CH – (DOWN) key :
Scans down among the channels in channel memory.

II VCR CH + (UP) key :
Scans up among the channels in channel memory.

◀◀ (REW) key :
Rewinds the tape and allows picture search.

ANT key * :
This key can be used only for VCR with VCR/TV selector. Switches the antenna output VCR to TV.

■ (STOP) key :
Stops tape transport.

► (PLAY) key :
Selects playback.

►► (FF) key :
Fast forwards the tape and allows picture search.

Note on DAT operation

The program input procedure differs slightly from the one used with DAT deck remote control units.

Procedure using the DAT deck remote control unit
1: [0]~[9] key → 2: [PROGRAM P] key → 3: Repeat steps 1 and 2 → 4: [▷] key

Procedure using the programmable remote control unit
1: [DAT PGM I] key → 2: (0/10)~(9) key → 3 (MEMORY 11 / 23) key → 4: Repeat steps 2 and 3 → 5: [▷] key

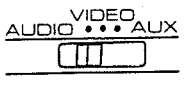
Direct selection with the remote control supplied with the DAT deck
1: [0]~[9] key → 2: [▷] key

Direct selection with the programmable remote control
1: [DAT PGM I] key → 2: (0/10)~(9) key → 3: [▷] key

As above, [DAT PGM I] DAT function key must be pressed before entering a number.

* For switching the antenna input for an optional VCR (for example Pioneer VH-900) the code of the VCR remote control must be memorized.

■CD PLAYER OPERATION



Set the TRANSMIT mode selector switch to AUDIO.

CD Function Keys (Operation of CD player)

|◀◀(TRACK SEARCH) key :
Returns to the beginning of the playing track.

▶▶|(TRACK SEARCH) key :
Advances to the next track.

DISC SEL key :
Selects the DISC No. (1 to 6) for magazine-type CD players.

PGM key :
Press to program the CD player.

◀◀(MANUAL SEARCH) key :
Selects fast backward.

■■ (PAUSE) key :
Pauses playback.

■ (STOP) key :
Stops playback.

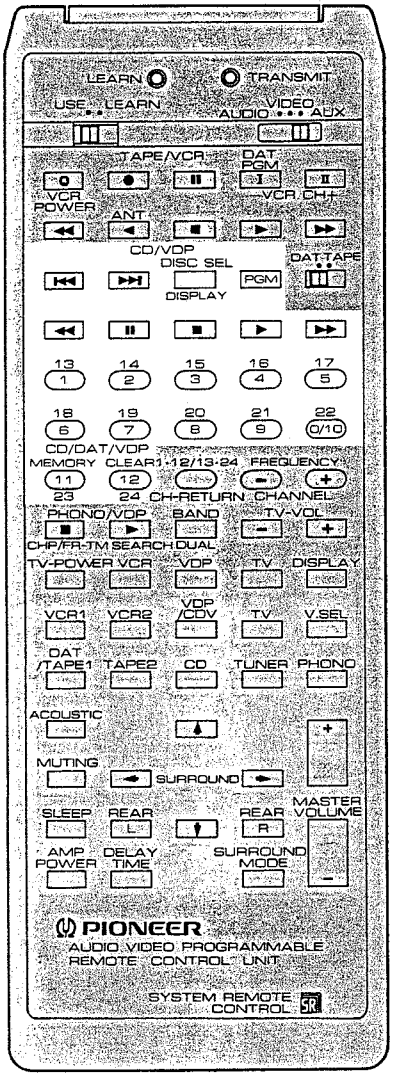
▶ (PLAY) key :
Selects playback.

▶▶(MANUAL SEARCH) key :
Selects fast forward.

1 - 0/10 (numeric) keys:
For direct selection of a track or programming of tracks.

MEMORY key:
Memorizes a program.

CLEAR key:
Erases a memorized program.



Note on CD operation

The program input and direct music selection procedures differ slightly from the ones used with CD player remote control units.

Programmed playback operation using the CD player remote control unit

(1: Disc No. 1~6 key) → 2: Track No. 1~0 key → 3: MEMORY key → 4: Repeat steps 1 to 3 → 5: PLAY key

Programmed playback operation using the programmable remote control unit

1: PGM key → (2: DISC SEL key) → 3: 0/10~9 key → 4: MEMORY (11/23) key → 5: Repeat steps 2 to 4 → 6: ▷ key

Direct music selection using the CD player remote control unit

(1: Disc No. 1~6 key) → 2: Track No. 1~0 key → 3: PLAY key)

Direct music selection using the programmable remote control unit

(1: DISC SEL key) → 2: PGM key → 3: 0/10~9 key → 4: ▷ key

As above, the PGM CD operation key must be pressed before entering a number.

■AMPLIFIER OPERATION

SURROUND AMPLIFIER function keys : (operation of this unit)

INPUT SELECTOR keys :
Press VCR 1, VCR 2, VDP/CDV, TV, CD, TUNER or PHONO to switch the amplifier input.

V.SEL key :
After pressing the V. SEL key, only the video signal can be changed. The selected audio signal remains as set.

TAPE MONITOR keys:
Press DAT/TAPE 1, TAPE 2 to switch between source and monitor.

ACOUSTIC memory select key :
The acoustic setting changes in the following manner each time this key is pressed

→FLAT →LOUDNESS →MEMORY A →
← MEMORY C ← MEMORY B ←

MUTING key:
Used to temporarily mute the sound. The volume is restored when pressed again.

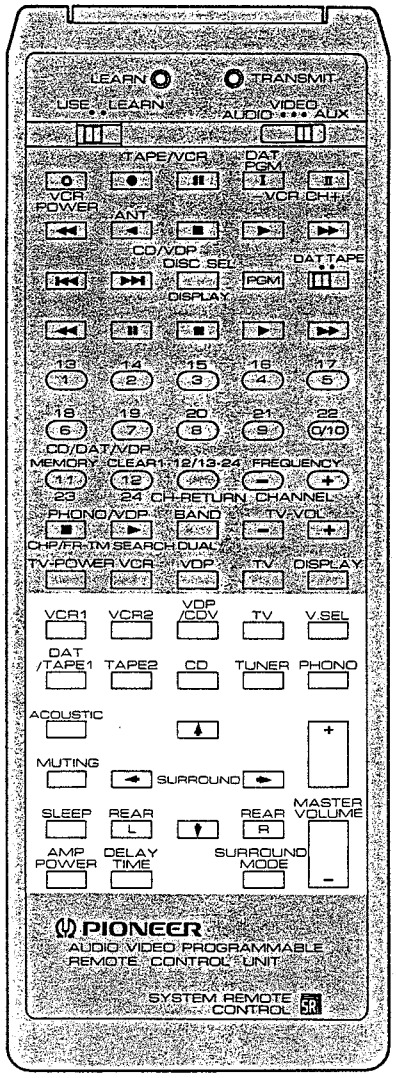
SLEEP timer key :
Activates the SLEEP timer. The length changes in the following manner each time the key is pressed:

→ 60 → 45 → 30 → 15 →OFF →

Unit: minutes

AMP POWER key :
Switches the amplifier power ON/OFF.

MASTER VOLUME REAR L, R keys:
Adjusts the left/right volume level balance of the surround speakers.
L side . . . when sound of R channel is too loud
R side . . . when sound of L channel is too loud



DELAY TIME key :
Switches the delay time for surround each time it is pressed.

→15 ms →20 ms →30 ms →

SURROUND keys (✣) :
The surround area can be set as desired by pressing these four keys. The left and right keys adjust the left and right level balance. The upper and lower keys adjust the front and surround level balance.

SURROUND MODE key :
The surround mode is switched in the following manner each time the key is pressed:

→STADIUM →SIMULATED SURROUND →
← OFF ← DOLBY SURROUND ←

MASTER VOLUME key :
Adjusts the overall (front and surround) volume.

DISPLAY key:
Displays/cancels the indication on the TV screen.

■VDP OPERATION

Set the TRANSMIT mode selector switch to VIDEO.

VDP function keys (operation of LaserVision player)

|◀◀ (CHAPTER SKIP) key :
Returns the beginning of the present chapter.

▶▶| (CHAPTER SKIP) key :
Advances to the next chapter.

DISPLAY call key:
Clears the chapter and frame/time displays on the screen.

PGM (PROGRAM) key :
Allows use of chapter program play, frame search and time search.

◀◀ (SCAN) key :
Selects fast backward.

▮▮ (PAUSE) key :
Video and audio are stopped and playback is paused.

■ (EJECT) key :
Playback is stopped when pressed once. Pressing again causes the disc tray to come out to the prescribed location.

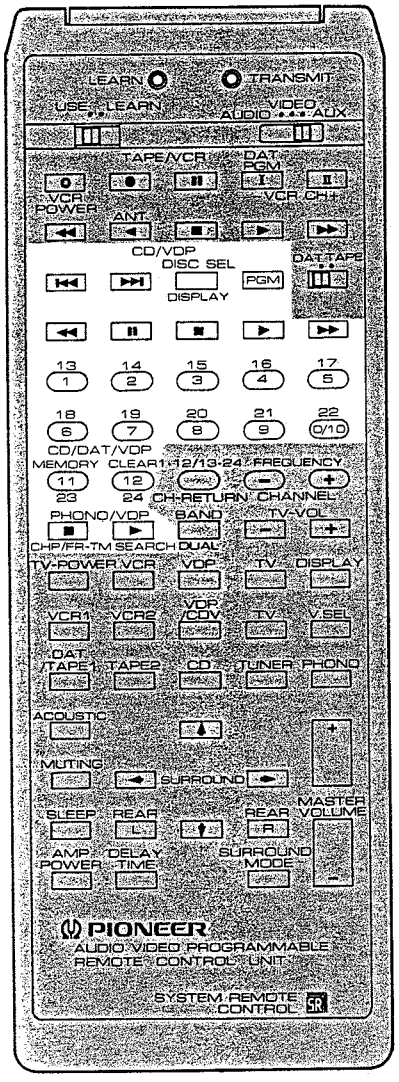
▶ (PLAY) key :
Selects playback.

▶▶ (SCAN) key :
Selects fast forward.

1 ~ 0/10 (NUMERIC) keys :
Used for chapter and frame/ time number search and for chapter program play.

MEMORY key :
Used for chapter program play.

CLEAR key :
Used for releasing repeat playback, number correction and mode release during search operation, and for releasing chapter program play.



CHP/FR-TM (CHAPTER/FRAME•TIME) key:
Used for chapter or frame (time) search operation.

SEARCH key :
Used for the search operation and for the memory repeat operation.

■TUNER AND TURNTABLE OPERATION

Set the TRANSMIT mode selector switch to AUDIO.

TUNER function keys (operation of FM/AM Tuner)

1 to 12 (STATION CALL) keys :
Allows direct reception of stations stored in STATION CALL switches.

1-12/13-24 (mode selector) key :
Switches between Mode 1 (1 to 12) and Mode 2 (13 to 24).

FREQUENCY + (UP):
Shifts the frequency up.

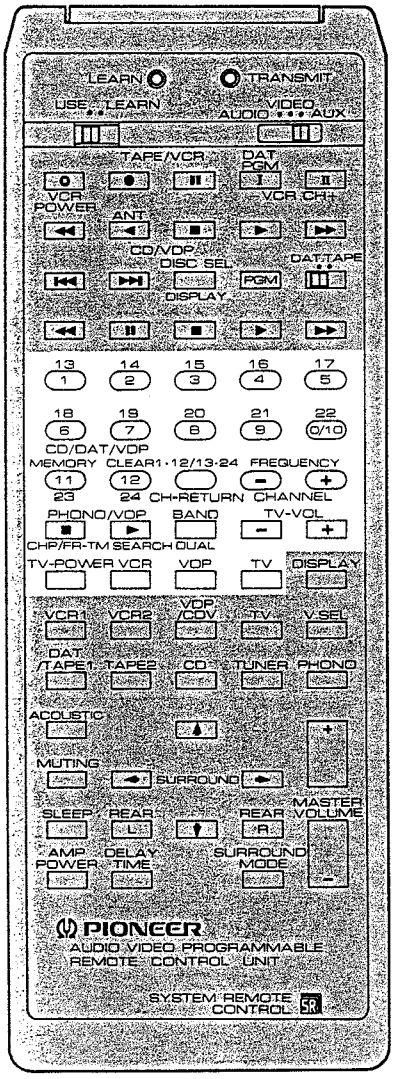
FREQUENCY – (DOWN):
Shifts the frequency down.

BAND key:
Switches the FM and AM (MW and LW) bands by turns.

PHONO function keys (operation of turntable)

► **(PLAY) key :**
Selects play.

■ **(STOP) key :**
Stops play.



■TV OPERATION

Set the TRANSMIT mode selector switch to VIDEO.

TV function keys (operation of component display or projection monitor receiver)

1 to 12 (CHANNEL CALL DIGIT) keys :
Used to call up channels.

CH-RETURN key :
Returns to the previously received channel.

CHANNEL + (UP) key:
Scans up among the channels in channel memory.

CHANNEL – (DOWN) key:
Scans down among the channels in channel memory.

DUAL (MTS) key:
Switches between MAIN, SAP, MAIN/SAP and (MONO). See the TV operating instructions for details.

* **TV-VOL +, – keys :**
Raises and lowers the volume.

* **TV-POWER key :**
Switches the power of the TV ON/OFF.

* **VCR, VDP, TV keys :**
Switch to the corresponding input.

[Reference]
The keys marked with * have the same function in both the AUDIO and VIDEO positions.

USE OF LEARNING FUNCTIONS

Prologue:

This programmable remote control unit is a remote control unit with learning functions. It is capable of learning and memorizing the remote control codes for operation of not only Pioneer audio and video equipment but also for AV equipment of other manufacturers. It is very convenient as all operations can be made from a single remote control unit. It can only store the remote control codes of infrared-type units. As almost all current wireless remote control units use the infrared system, this learning function allows for command code storage for most audio and video components.

The programmable remote control can memorize control signals for other system components. However, this does not mean that the remote controls of other components are not needed anymore, since they must be used at times of re-programming.

NOTE:

When programming, make sure that the equipment cannot operate. Otherwise, loss of important tapes or sudden loud noise output may occur.

Operation can be prevented by turning off the main power supply of the equipment removing the power cord from the AC outlet or covering the remote sensor window.

Note that infrared rays are liable to be reflected off walls or the ceiling to cause the equipment to operate.

Keys which can be preset

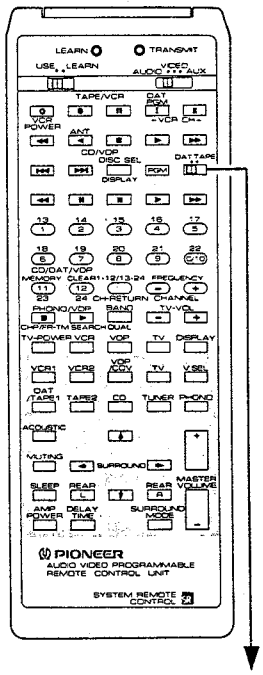
When the TRANSMIT mode selector switch is in the AUDIO or VIDEO position, the learning function works for all keys other than the SURROUND AMPLIFIER function keys. In the AUX position, the learning function works for all keys.

Preset commands can be changed.

In the AUDIO and VIDEO positions, the unit is preset at the factory with Pioneer's uniform remote control codes. If the corresponding equipment is Pioneer, they can be used as they are. If more operations than those first stored in the memory are desired, use the learning function. In addition, it is possible to restore the Pioneer uniform remote control codes even after other codes have been preset. (Refer to "Returning to the Initial Settings" for this procedure.)

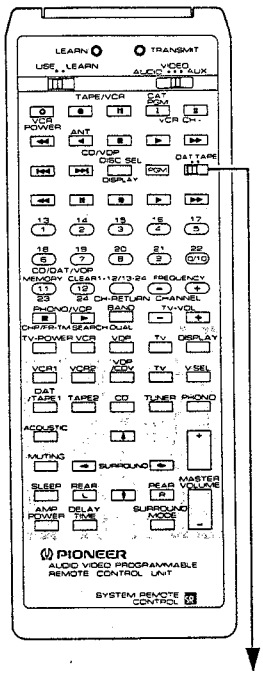
- In each mode one function per key may be programmed, for a total of up to 154 functions.
- When presetting keys, make sure that the remote control units of both this and the other component are loaded with fresh batteries.
- For some special types of infrared remote control units programming may be impossible.

AUDIO mode



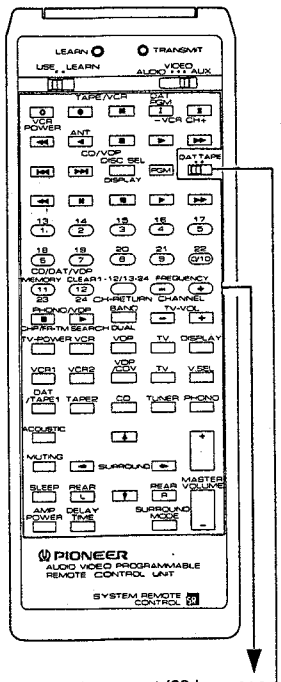
In the AUDIO mode the TAPE function keys can be preset with new functions for the DAT position and the TAPE position.
The initial [SET] settings will remain in the other position (43 keys can be programmed.).

VIDEO mode



In the VIDEO mode the DAT/TAPE 1 switch is inoperative (43 keys can be programmed.).

AUX mode

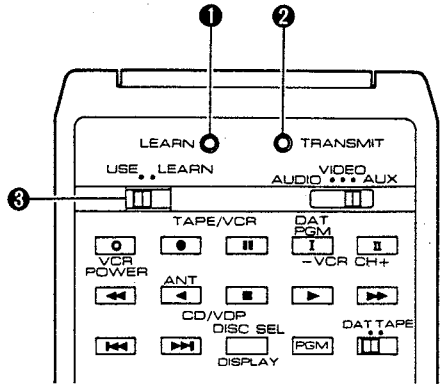


All buttons can be preset (68 keys can be programmed.).

In the AUX mode the DAT/TAPE 1 switch is inoperative.

[Operation Example]
Using the remote control unit of your VCR to program the playback command.

- It is recommended that the name of the key and its function correspond. This is convenient when operating equipment.



❶ LEARN indicator

This indicator shows the remote control unit operating condition.

LIT:
Learning is possible.

OFF:
Regular remote control functions are performed.

FLASHING:
When you forced to learn by the keys which can not learn.

❷ TRANSMIT indicator

This indicator flashes when remote control signals are sent.

❸ LEARN selector switch

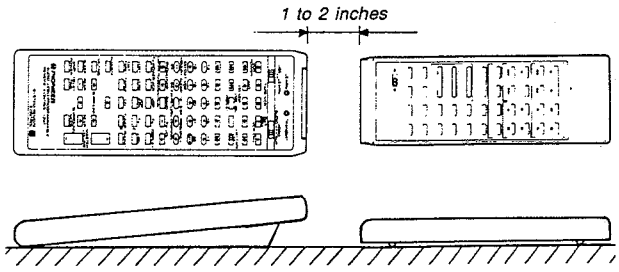
Set as follows:

LEARN:
This position is used for storing the codes of your remote control unit.

USE:
Set to this position after codes have been stored in the LEARN position. Set to this position for normal operation.

[Operation example]

1. Set the LEARN switch of the programmable remote control unit to the LEARN position and set the TRANSMIT mode selector switch to the VIDEO position.
   - Programming is possible with the TRANSMIT mode selector switch in any position, but VIDEO is used as an example.
2. Place the transmission sections of the programmable remote control unit and the remote control of the VCR facing each other.



   - Place the two units on a table, separated by 2 to 5 cm (1 to 2 inches).
     Memorization will not be possible if they are too close.
3. Hold down the VCR PLAY key of the programmable remote control unit until the LEARN indicator lights up, then release the key.
4. Hold down the PLAY key of the VCR remote control unit.
5. Release the key of the VCR remote control after making sure that the LEARN indicator of the programmable remote control has been extinguished.

NOTE:
If the LEARN indicator flashes, it indicates that you are trying to preset a key not available for the learning function, or otherwise the program capacity has been exceeded. In case the program capacity has been exceeded, the function programmed last will not be memorized correctly. All previously programmed functions, however, will be retained in memory and may be used as they are if the last function is not essential. For re-programming refer to page 25 "Returning to the Initial Settings".

6. Set the LEARN selector switch of the programmable remote control unit to the USE position.
   - The previous code (Pioneer uniform remote control code or code for other equipment) is erased and replaced by the new code.
7. Check that the program works.
   - Try actual operation and make sure the unit works properly.
   - If the VCR does not operate when pressing the key, change angle, position and distance between both remote control units and repeat the programming procedure.
   - When programming, make sure that the function indications (for example, ► , ►► , ■) on the other remote control unit and the programmable remote control unit are the same. This will facilitate operation.

Questions and Answers about the Learning Function

Q: The remote control unit of my VCR has two REC (recording) keys. They both have to be pressed at the same time to start recording. What is the learning procedure in this case?

A: Hold one of the keys on the programmable remote control depressed (for example the VCR ● key) until the LEARN indicator lights up, and then press the two keys on the VCR remote control simultaneously.

Q: The remote control unit of my VCR has a REC (recording) key and a PLAY (playback) key and they both have to be pressed at the same time to start recording. What is the learning procedure in this case?

A: Hold one of the keys on the programmable remote control depressed (for example the VCR ● key) until the LEARN indicator lights up, and then press the REC and PLAY keys on the VCR remote control simultaneously.

- As described above, operations which require two keys to be pressed at the same time are programmed by pressing the two keys simultaneously.

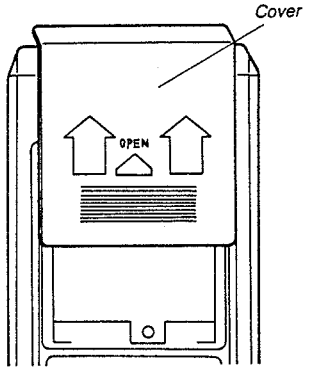
Operating other equipment by the programmable remote control unit

1. Set the LEARN switch of the programmable remote control unit to the USE position.
2. Set the TRANSMIT mode selector switch to the desired position (AUDIO/VIDEO/AUX).
   - Set to the VIDEO position for programming as described in the example.
3. Press the key of the desired function.
   - The TRANSMIT indicator lights up while the remote control unit is sending codes.

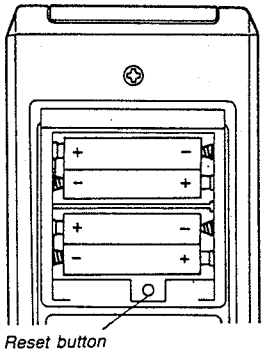
Note:
- When operating programmed keys, always set the LEARN selector switch to the USE position. Operation is not possible in the LEARN position.
- For functions which require two keys to be pressed at the same time (recording etc.) or functions for which several codes are sent simultaneously (auto functions, timer programming, etc.) the programming procedure is different and improper operation may occur.

Returning to the Initial Settings

1. Set the LEARN selector switch to the LEARN position.
2. Remove the battery cover.



3. Press one of the LEARN keys. The LEARN indicator will light up.
4. Use a ball-point pen or similar object to press the RESET key while the LEARN indicator is flashing.



- The programmed functions for the AUDIO, VIDEO and AUX positions are cleared, and the remote control unit is reset to the Pioneer uniform remote control codes.
- Do not press the keys with too much force.

OPERATIONS

Playback of Audio Sources

1. Press the POWER switch ON.
2. Select the playback source with the INPUT SELECTOR. For playback with PHONO, TUNER or CD input the DAT/TAPE 1, TAPE 2 switch must be set to OFF.
   - For record playback ..... PHONO
   - For radio reception ..... TUNER
   - For compact disc playback ..... CD
   - For TAPE 2 playback ..... TAPE 2
   - For DAT or TAPE 1 playback ..... DAT/TAPE 1
3. Operate the selected component. (Refer to the corresponding instruction manual for operation details)
4. Adjust the volume.

- If left and right levels are unbalanced, adjust them with the BALANCE switches. To reset to the center position, press both switches (L and R) simultaneously.

5. Adjust the tone.

- Adjust the TREBLE and BASS switches to obtain the desired tone.
- When using the ACOUSTIC MEMORY function, select the desired setting with the SELECT switch.
- When listening to monaural sources, you can create a simulated stereo effect by turning the SIMULATED STEREO switch ON.
- Select an appropriate SURROUND mode, if desired.

Playback of Video Sources

1. Press the POWER switch ON.
2. Set the VIDEO ADAPTER switch to OFF
3. Select the playback source with the INPUT SELECTOR.
   - For LaserVision (video disc, video compact disc) playback ..... VDP/CDV
   - For TV reception with a TV tuner ..... TV
   - For playback with the VCR connected to the VCR 2 terminals ..... VCR 2
   - For VCR 1 playback ..... VCR 1
4. Turn the color monitor or TV power on.

- When using a TV, set it to an empty channel, and set the RF modulator output channel accordingly.

5. Operate the component selected at step 3. (Refer to the corresponding instruction manual for operation details)
6. Adjust the volume.
7. Adjust the tone.

- In the same way as for audio sources: Adjust the BALANCE, TREBLE, BASS, ACOUSTIC MEMORY SELECT, and SIMULATED STEREO controls as required.
- When playing back from the VCR, select STEREO or MONO with the VCR MODE switch. If necessary, turn ON the VCR NOISE FILTER switch.

When Using a Video Adaptor

When a color corrector or enhancr is connected to the VIDEO ADAPTOR terminals on the rear panel, turn the VIDEO ADAPTOR switch ON before operation.

Recording on Audio Tapes

To record from the source selected with the INPUT SELECTOR

1. Turn the amplifier on.
2. Select the source with the INPUT SELECTOR.
3. Operate the selected component.
4. Insert a tape in the recording deck, and operate it for recording.
   - Refer to the tape deck instruction manual for operation details.

When listening the playback sound while recording, adjust the amplifier volume and tone controls (Refer to the "Playback of Audio Sources" section).
Adjustment of the VOLUME, BALANCE, TREBLE, BASS and other controls has no effect on the recorded sound.

Dubbing Audio Tapes

Dubbing can be performed from the DAT/TAPE 1 deck to the TAPE 2 deck.

1. Turn the amplifier on.
2. Turn on the tape deck connected to the DAT/TAPE 1 jacks, and insert the recorded tape.
3. Turn on the tape deck connected to the TAPE 2 jacks, and insert a blank tape.
4. Set the INPUT SELECTOR to DAT/TAPE 1.
5. Set the DAT deck or tape deck connected to the DAT/TAPE 1 jacks to playback, and start recording with the tape deck connected to the TAPE 2 jacks.

If the deck connected to the TAPE 2 terminals is equipped with a monitor function, you can listen to the just recorded sound by pressing the TAPE 2 INPUT SELECTOR.

Recording on Video Tapes

You can record the source selected with the INPUT SELECTOR by setting the connected VCR to the recording mode.

1. Turn the amplifier on.
2. Select the source with the INPUT SELECTOR.
3. Operate the selected component.
4. Insert a blank cassette tape into the recording VCR, then operate it for recording.
   - Refer to the corresponding instruction manual for operation details.

Dubbing Video Tapes

Dubbing between VCR 1 and VCR 2 can be performed in both directions.

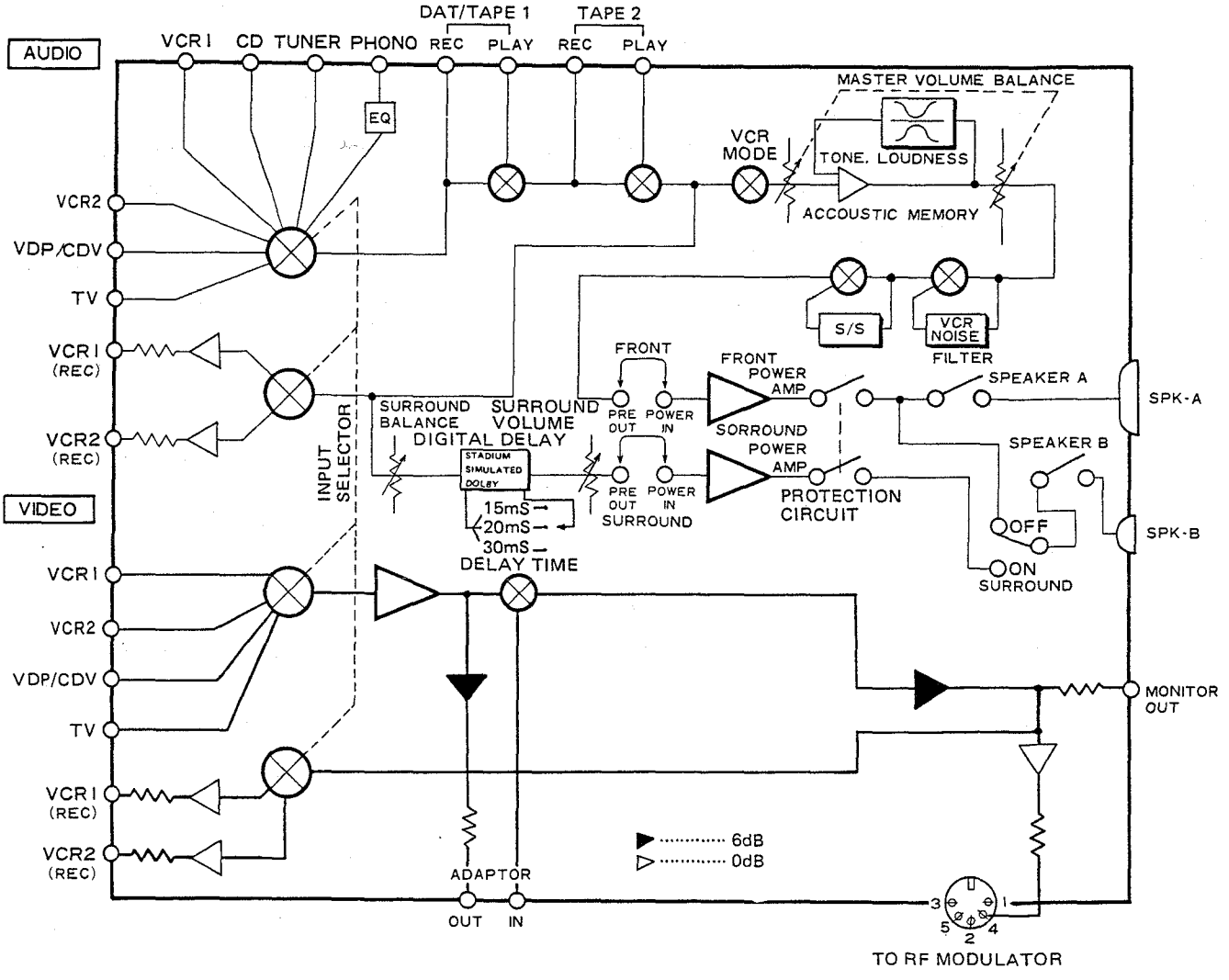
[Dubbing from VCR 1 to VCR 2]

1. Turn the amplifier on.
2. Turn on the VCR connected to the VCR 1 jacks, and insert the recorded tape.
3. Turn on the VCR connected to the VCR 2 jacks, and insert a blank tape.
4. Set the INPUT SELECTOR to VCR 1.
5. Set the VCR connected to the VCR 1 jacks to playback, and start recording with the VCR connected to the VCR 2 jacks.

[Dubbing from VCR 2 to VCR 1]

1. Turn the amplifier on.
2. Turn on the VCR connected to the VCR 2 jacks, and insert the recorded tape.
3. Turn on the VCR connected to the VCR 1 jacks, and insert a blank tape.
4. Set the INPUT SELECTOR to VCR 2.
5. Set the VCR connected to the VCR 2 jacks to playback, and start recording with the VCR connected to the VCR 1 jacks.

BLOCK DIAGRAM



TROUBLESHOOTING

Incorrect operations are often mistaken for trouble and malfunctions. If you think that there is something wrong with this component, check the points below. Sometimes the trouble may lie in another component. Investigate the other components and electrical appliances being used.
If the trouble connot be rectified even after exercising the checks listed below, ask your nearest PIONEER authorized service center or your dealer to carry out repair work.

Symptoms	Posibble Causes	Remedy
Power does not come on	• Power plug has been removed from the outlet. • The power plug has been connected to the outlet of another component (such as timer), and the power of the other unit is off.	• Insert into the wall or timer outlet. • Turn on the power of the other component.
There is no sound	• MUTING (– ∞) switch is set to ON. • The connection cords have come off from the terminals or are improperly connected. • The pin plugs of connection cords or terminals are dirty. • The speaker ON/OFF switch is set to OFF. • DAT/TAPE 1 or TAPE 2 is set to ON.	• Set the MUTING (– ∞) switch to OFF. • Connect properly. • Remove the dirt. • Set the switch to ON (A or B). • Set the switch to OFF.
(When playing tape)	• DAT/TAPE 1, TAPE 2 switch set to OFF. • Operation of the tape deck is incorrect.	• Set to ON (DAT/TAPE 1 or TAPE 2). • Refer to the Owner's Manual of the tape deck.
(Other situations)	• The position of the input selector switch does not match the component selected for playback. • Operation of the other component is incorrect.	• Set the switch to the proper position. • Refer to the Owner's Manual of the other component.
There is no picture	• The connection cords have come off from the terminals or are improperly connected. • The pin plugs of connection cords or terminals are dirty. • The position of the input selector switch or video selector does not match the component selected for playback. • The video adaptor switch is ON. • Operation of the other component is incorrect.	• Connect properly. • Remove the dirt. • Set the switch to the proper position. • Set the switch to OFF. • Refer to the Owner's Manual of the other component.
There is sound from only one speaker	• One of the connector cords or speaker cords is not connected. • BALANCE control not set to center position.	• Connect properly. • Press both buttons to reset to center position.
Recording on tape is not possible	• Operation of the tape deck is incorrect.	• Refer to the Owner's Manual of the tape deck.
Tape dubbing is not possible	• Operation of the tape deck is incorrect.	• Refer to the Owner's Manual of the tape deck.
No surround effect	• SPEAKERS B switch is set to OFF. • SURROUND switch is set to OFF. • Audio input is monaural.	• Set SPEAKERS B switch to ON. • Set SURROUND switch to ON (rear panel). • Set to SIMULATED SURROUND mode.

SPECIFICATIONS

Audio section

DIN continuous power output (both channels driven)
- 1 kHz, T.H.D. 1%, 8Ω (STEREO MODE) ..... 125W + 125W
- 1 kHz, T.H.D. 1%, 4Ω (STEREO MODE) ..... 150W + 150W
- 1 kHz, T.H.D. 1%, 8Ω (SURROUND MODE)
  - FRONT ..... 80W + 80W
  - REAR ..... 30W + 30W
- 1 kHz, T.H.D. 1%, 4Ω (SURROUND MODE)
  - FRONT ..... 100W + 100W
  - REAR ..... 38W + 38W

Input (sensitivity/impedance)
- PHONO 2.5mV/50kΩ
- VCR 1, VCR 2, VDP/CDV, TV, DAT/TAPE 1, TAPE 2, CD, TUNER 150mV/30kΩ
- POWER AMP IN: FRONT 1V/50kΩ
- POWER AMP IN: SURROUND 150mV/50kΩ

Output (level/impedance)
- VCR 1, VCR 2 OUT, DAT/TAPE 1, TAPE 2 REC 150mV/4.7kΩ
- PRE AMP OUT: FRONT 1V/470Ω
- PRE AMP OUT: SURROUND 150mV/470Ω
- L + R OUT 1V/4.7kΩ

Damping factor (1kHz, 8Ω) 55

Frequency response
- PHONO (20Hz — 20kHz) ..... ±0.3dB
- VCR 1, VCR 2, VDP/CDV, TV, DAT/TAPE 1, TAPE 2, CD, TUNER (5Hz — 100kHz) ..... $^{+0}_{-3}$ dB
- VDP/CDV IN → SURROUND OUT (30Hz — 7kHz) .... (at DOLBY SURROUND) $^{+0}_{-3}$ dB

Phono overload level (T.H.D. 0.03%, 1kHz) 150mV

Tone control
- BASS ..... ±8dB (100Hz)
- TREBLE ..... ±8dB (10kHz)

VCR noise filter ..... 50Hz, 5kHz: −6dB/oct

Muting ..... −∞

Loudness contour ..... +6dB (100Hz) +3dB (10kHz)

Channel separation
- PHONO 65dB (1kHz)
- VCR 1, VCR 2, VDP/CDV, TV, DAT/TAPE 1, TAPE 2, CD, TUNER 65dB (1kHz)

Signal to noise ratio (IHF,A network, shorted)
- PHONO 83dB
- VCR 1, VCR 2, VDP/CDV, TV, DAT/TAPE 1, TAPE 2, CD, TUNER 98dB

Signal to noise ratio (DIN continuous power/50mW)
- PHONO 73dB/57dB
- VCR 1, VCR 2, VDP/CDV, TV, DAT/TAPE 1, TAPE 2, CD, TUNER 87dB/60dB

Speaker load impedance
- A or B ..... 4 — 8Ω
- A + B ..... 8 — 16Ω

Video section

Input (sensitivity/impedance)
- VCR 1, VCR 2, VDP/CDV, TV, VIDEO ADAPTOR IN 1Vp-p/75Ω

Output (level/impedance)
- VCR 1, VCR 2, VIDEO ADAPTOR, MONITOR OUT 1Vp-p/75Ω

Frequency response
- VCR 1, VCR 2, VDP/CDV, TV, VIDEO ADAPTOR → MONITOR OUT ..... 5Hz — 6MHz, $^{+0}_{-3}$ dB

Signal to noise ratio 55dB

Crosstalk 55dB (3.58MHz)

Miscellaneous

Power requirements AC220V, 50/60Hz

AC Outlets
- SWITCHED × 2 ..... TOTAL 200W MAX
- UNSWITCHED × 1 ..... 100W MAX

Power consumption 610W
- In stand-by condition 5W

Dimensions ..... 420 (W) × 124 (H) × 397 (D) mm

Weight (without package) ..... 11.3 kg

Furnished Parts

Dry cell battery 4

Remote control unit 1

Operating instructions 1

Video connection cord 1

NOTE:
Specifications and design are subject to change without notice due to improvements.

* Measured by Audio Spectrum Analyzer.